

INTERNATIONAL SEARCH REPORT

International Application No
PCT/DE2004/002441

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 F17C11/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 F17C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2001/027724 A1 (OSHIMA HISAYOSHI ET AL) 11 October 2001 (2001-10-11) abstract; figures 2,7 paragraph '0049! paragraph '0075!	1-6, 14-20
X	EP 1 327 606 A (TOHOKU TECHNO ARCH CO., LTD; OKADA, MASUO) 16 July 2003 (2003-07-16) abstract; figure 12 page 8, line 13 - line 15 page 8, line 23 - line 25	1-6, 14-20
A	US 2002/028176 A1 (NAKAMURA KENJI) 7 March 2002 (2002-03-07) abstract; figures	1-20
	-/-	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

11 May 2005

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20/05/2005

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PATENT ABSTRACTS OF JAPAN vol. 012, no. 392 (M-755), 19 October 1988 (1988-10-19) & JP 63 140200 A (MITSUBISHI HEAVY IND LTD), 11 June 1988 (1988-06-11) abstract	1-20
P,A	US 2004/031390 A1 (MYASNIKOV VITALIY ET AL) 19 February 2004 (2004-02-19) abstract; figures. paragraph '0016! paragraph '0020! paragraph '0032!	1-20

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/DE2004/002441

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 2001027724	A1	11-10-2001	JP	2001322801 A	20-11-2001
			DE	10110169 A1	27-09-2001
EP 1327606	A	16-07-2003	WO	0228767 A1	11-04-2002
			CA	2424861 A1	13-03-2003
			EP	1327606 A1	16-07-2003
			US	2004011444 A1	22-01-2004
US 2002028176	A1	07-03-2002	JP	2002069502 A	08-03-2002
JP 63140200	A	11-06-1988	NONE		
US 2004031390	A1	19-02-2004	US	2004031591 A1	19-02-2004
			AU	2003258164 A1	03-03-2004
			WO	2004016982 A2	26-02-2004